

WHAT IS CLAIMED IS

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1. A data processing system comprising:  
a data transfer rate converting part  
converting a data transfer rate in a predetermined  
coded data stream;

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a time information updating part updating  
time information which the predetermined coded data  
stream has, according to the data transfer rate  
conversion ratio applied in said data transfer rate  
converting part; and

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a decoding device decoding the coded data  
stream for which the data transfer rate has been  
converted by said data transfer rate converting part  
and the time information is updated by said time  
information updating part, and

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wherein:

said decoding device decodes the coded  
data stream for which the data transfer rate has  
been thus converted and the time information has  
been updated, in timing according to the time  
25 information which has been thus updated by said time  
information updating part.

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2. The data processing system as claimed  
in claim 1, wherein:

the data transfer rate conversion  
performed by said data transfer rate converting part  
35 comprises reduction in the data transfer rate; and  
the updating in the time information  
performed by said time information updating part

comprises extension of the time indicated by the time information according to said reduction in the data transfer rate.

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3. The data processing system as claimed in claim 1, wherein:

- 10 the coded data stream comprises video data comprising intra-frame coded image frames which can be decoded alone and predictive coded image frames for which data of the intra-frame coded frames is needed for decoding them; and
- 15 in a predetermined condition, a mode in which only the intra-frame coded image frames are transferred and are then decoded is applied

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4. The data processing system as claimed in claim 1, wherein:

- in case the coded data stream includes  
25 video data and audio data, the audio data is transferred in prior to transfer of the video data; and

the time information of the audio data is not updated and is transferred as it is.

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5. The data processing system as claimed in claim 1, wherein:

said decoding device comprises a re-updating part which updates the once updated time

information again so as to return it into the original state for the coded data stream for which the time information has been once updated by the time information updating part.

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6. The data processing system as claimed  
10 in claim 1, further comprising a time designating part for designating a time for the coded data stream, and

wherein:

said time information updating part  
15 updates time information of a part of the coded data stream and transfers it, which part of the coded data stream belongs to a time zone starting after the time designated by said time designating part.

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7. A data processing apparatus comprising:

25 a data transfer rate converting part converting a data transfer rate a predetermined coded data stream, and

30 a time information updating part updating time information which the predetermined coded data stream has according to a data transfer rate conversion ratio applied in said data transfer rate converting part, and

wherein:

35 the coded data stream for which the data transfer rate has been converted by said data transfer rate converting part and the time information is updated by said time information

updating part is decoded by a transfer destination device, and, upon the decoding, the coded data stream for which the data transfer rate has been thus converted is decoded in timing according to the 5 time information which has been thus updated by said time information updating part.

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8. The data processing apparatus as claimed in claim 7, wherein:

the data transfer rate conversion performed by said data transfer rate converting part 15 comprises reduction in the data transfer rate; and  
the updating in the time information performed by said time information updating part comprises extension of the time indicated by the time information according to said reduction in the 20 data transfer rate.

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9. The data processing apparatus as claimed in claim 7, wherein:

the coded data stream comprises video data comprising intra-frame coded image frames which can be decoded alone and predictive coded image frames 30 for which data of the intra-frame coded frames is needed for decoding them; and

in a predetermined condition, a mode in which only the intra-frame coded image frames are transferred is applied.

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10. The data processing apparatus as claimed in claim 7, wherein:

in case the coded data stream includes video data and audio data, the audio data is transferred in prior to transfer of the video data; and

the time information of the audio data is not updated and is transferred as it is.

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11. The data processing apparatus as claimed in claim 7, wherein:

15 in response to time information being designated for the coded data stream, said data transfer rate converting part converts a data transfer rate for a part of the coded data stream and said time information updating part updates the 20 time information of said part of the coded data stream, which part of the coded data stream belong to a time zone starting after the time thus designated.

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12. A data processing apparatus receiving a transferred coded data stream, and decoding and 30 reproducing the coded data stream, wherein:

the transferred coded data stream has been transferred after time information thereof was updated according to a data transfer capacity of a data transfer path applied for transferring the 35 coded data stream;

said apparatus comprises a time information re-updating part receiving the coded

data stream, and updating the time information already once updated again so as to return it into the original one; and

5       said apparatus decodes the coded data stream for which the time information has been thus updated again by said time information re-updating part, according to the time information thus updated again by the time information re-updating part.

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13. The data processing apparatus as  
15 claimed in claim 12, wherein:

in case the coded data stream comprises video data and audio data, the audio data is transferred in prior to transfer of the video data, and also the video data is transferred without 20 having undergone updating of the time information thereof; and

said apparatus comprises an order re-arranging part re-arranging appropriately the order of the video data and the audio data received 25 according to the time information after being thus updated again by the time information re-updating part for the received coded data stream.

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14. A data processing method comprising:  
a data transfer rate converting step of  
converting a data transfer rate a predetermined  
35 coded data stream;

a time information updating step of  
updating time information which the predetermined

coded data stream has, according to a data transfer rate conversion ratio applied in said data transfer rate converting step; and

5       a decoding step decoding the coded data stream for which the data transfer rate has been converted in said data transfer rate converting step and the time information is updated in said time information updating step, and

wherein:

10      in said decoding step, the coded data stream for which the data transfer rate has been thus converted is decoded in timing according to the time information which has been thus updated in said time information updating step.

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15. The data processing method as claimed  
20 in claim 14, wherein:

the data transfer rate conversion performed in said data transfer rate converting step comprises reduction in the data transfer rate; and

25      the updating in the time information performed in said time information updating step comprises extension of the time indicated by the time information according to said reduction in the data transfer rate.

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16. The data processing method as claimed  
in claim 14, wherein:

35      the coded data stream comprises video data comprising intra-frame coded image frames which can be decoded alone and predictive coded image frames

for which data of the intra-frame coded frames is needed for decoding them; and

in a predetermined condition, a mode in which only the intra-frame coded image frames are  
5. transferred and are then decoded is applied

10 17. The data processing method as claimed in claim 14, wherein:

in case the coded data stream includes video data and audio data, the audio data is transferred in prior to transfer of the video data;  
15 and

the time information of the audio data is not updated and is transferred as it is.

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18. The data processing method as claimed in claim 14, further comprising:

a re-updating step of updating the once  
25 updated time information again so as to return it into the original state for the coded data stream for which the time information has been once updated in said time information updating step, upon decoding the coded data stream.

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19. The data processing method as claimed  
35 in claim 14, further comprising a time designating step of designating time information for the coded data stream, and

wherein:

- for a part of the coded data stream belonging to a time zone starting after the time designated in said time information designating step,  
5 a data transfer rate is converted in said data transfer rate converting step, time information is updated in said time information updating step, and then the part of the coded data stream is transferred.